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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,691	04/05/2006	Yukio Imaizumi	2006_0473A	3727
513 7590 04/08/2009 WENDEROTH, LIND & PONACK, L.L.P. 1030 15th Street, N.W., Suite 400 East Washington, DC 20005-1503				
EXAMINER				
BAREFORD, KATHERINE A				
ART UNIT		PAPER NUMBER		
1792				
MAIL DATE		DELIVERY MODE		
04/08/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/574,691

**Applicant(s)**

IMAIZUMI ET AL.

**Examiner**

Katherine A. Bareford

**Art Unit**

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13 and 18-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13 and 18-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 24, 2009 has been entered.

The amendment filed with the RCE submission of February 24, 2009 has been received and entered. With the entry of the amendment, claims 1-12 and 14-17 are canceled, and claims 13 and 18-26 are pending for examination.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 13 and 18-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to

one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Independent claim 13, lines 6-8, has been amended by the amendment of February 24, 2009 to provide that "... an average area covered by each molten particle . . . when the molten particles have stuck to the surface of the metal body is . . .". The Examiner has reviewed the disclosure as originally filed. Original claim 1 and the disclosure provide that "... an average area of each of molten particles . . . when the molten particles have stuck to the surface of the thermal spray subject is . . ." and does not indicate that "an average area covered by each molten particle" is measured. As originally worded, the description of "average area" is confusing and allows for multiple interpretations. For example, the "total surface area of the entire particle" (which the Examiner understands is what applicant was trying to claim in the amendment of September 15, 2008) could be what is meant. However, the "average area" could also be the surface area of the particle that is actually stuck to the surface, that is the area that contacts the surface, since the language provides "an average area . . . when the particles have stuck to the surface". Applicant appears to be claiming a variant of this in the present amendment of February 24, 2009, where it is indicated that "an average area covered by each molten particle" is claimed, since the area covered by each molten particle would be an area of the same size as the area that contacts the surface onto which the particle is sprayed. However, this would include areas other than that formed on the surface of the metal body itself. There is no indication that the

average area covered by each molten particle would be the correct understanding of what is measured, and therefore, the claim contains new matter. In the amendment of February 24, 2009, applicant's attorney argues (page 5) that:

"... page 11, lines 5-19 of the original specification explains that molten particles collide against a thermal spray subject (i.e., the metal body), and are deposited on the surface. Thus, the object of coating the metal body is achieved by having the molten particles collide against the metal body so as to be deposited on the metal body. Of course, when considering depositing particles on a metal body in order to coat the metal body, it is natural to consider how much area will be covered (or coated) by each particle. As such, it follows from the purpose of "coating" an object that the "average area" of each molten particle that has stuck to the surface of the metal body would refer to the average area "covered by" the stuck molten particle. Consequently, based on the purpose and the entire disclosure of the present invention as set forth in the original drawings and specification, it is submitted that one of ordinary skill in the art would clearly understand that the "average area" recited in the claims refers to the average area "covered by each molten particle of the metal thermal spray material when the molten particles have stuck to the surface of the metal body." It is therefore submitted that the amendments clarifying the phrase "average area" as discussed above do not introduce any new matter, and therefore overcome the Examiner's formal rejections under 35 U.S.C. § 112, first paragraph."

However, the Examiner has noted above how the wording of the claim and specification as originally filed provides for multiple possible interpretations of how the area size of the particles to be measured is determined, and that it is not clear which interpretation is to be used. Applicant's attorney above provides arguments as to what one of ordinary skill in the art would understand from reading the disclosure (that is, what common experience would provide), however, as noted in MPEP 2145 (I) – The arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346

F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997) (“An assertion of what seems to follow from common experience is just attorney argument and not the kind of factual evidence that is required to rebut a prima facie case of obviousness.”) To provide what one of ordinary skill in the art would understand from reading the specification in this case would be what is now claimed (so as to overcome the Examiner’s stated position as to the unclarity of the disclosure), applicant’s attorney needs to provide a showing, such as by affidavit or declaration as to what one of ordinary skill in the art would actually understand from reading the disclosure as originally filed. Arguments by applicant’s attorney alone are not sufficient for the reasons indicated in MPEP 2145 (I) above.

The other dependent claims do not cure the defects of the claims from which they depend.

#### ***Claim Rejections - 35 USC § 103***

4. The rejection of claims 13 and 22-25 under 35 U.S.C. 103(a) as being unpatentable over Thermal Spraying: Practice, Theory, and Application (hereinafter TS) in view of Browning (US 4762977), Kang (US 4788077) and EITHER Maros et al (US 3052590) OR Tenkula et al (US 5123152) is withdrawn due to applicant’s amendment of February 24, 2009 to put the features of claim 14 into independent claim 13.

5. The rejection of claim 26 under 35 U.S.C. 103(a) as being unpatentable over TS in view of Browning, Kang and EITHER Marcos OR Tenkula as applied to claims 13 and 22-25 above, and further in view of Cole et al (US 5407035) is withdrawn due to applicant's amendment of February 24, 2009 to put the features of claim 14 into independent claim 13.

### ***Response to Arguments***

6. Applicant's arguments filed February 24, 2009 have been fully considered but they are not persuasive.

As to the 35 USC 103 rejections to the claims, the Examiner has noted applicant's arguments as to the benefits of using the specific range of the particle area, and how applicant teaches that if the average area of each molten particles is smaller or larger than the claimed range that sufficient adhesion strength cannot be obtained (paragraph [0026] of the substitute specification of September 15, 2008, for example). The Examiner has accepted this as a showing of the unexpected benefits for that range for the thermal spraying process that uses plasma spraying (as now in independent claim 13), as applicant's showings are specifically as to plasma spraying (see the abstract, paragraphs [0023], [0024], [0026] of the specification).

However, as noted in the 35 USC 112, first paragraph, rejection above, claims 13 and 18-26 remain rejected as containing new matter.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine A. Bareford whose telephone number is (571) 272-1413. The examiner can normally be reached on M-F(6:00-3:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Katherine A. Bareford/  
Primary Examiner, Art Unit 1792